

* SWBAT solve momentum and impulse word problems

Sep 6-2:31 PM

SECA Physics
Friday 11 December 2015

Welcome!!!


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Centering...

Test next Tuesday!

* Pick up:

- white board, eraser, marker
- slip of paper (for later)



Opening Question:

How many can you think of:

Safety from taking more TIME to bring something to a stop

WATER, HELMET, GLOVES
SHOES, PADDING, BULLET PROOF VEST
BUMPER, GRASS
PILLOWS, INCLINES/RAMPS, BRAKES
FAT SEAT BELTS, AIR BAGS
NETS,

Sep 7-7:04 AM

Impulse is CHANGE in momentum mom. = $m \cdot v$

$$I = \Delta \text{mom.} = \text{mom}_2 - \text{mom}_1$$

Impulse = Force X Time

$$I = F \cdot t$$

= EQUALS
 Δ CHANGE IN

Safety: Big forces = OUCH!!!

When something stops, it changes momentum

Less OUCH if more TIME to stop!

Very useful: How many equations can we make?

ON YOUR WHITE BOARD

$$\Delta \text{mom.} = F \cdot t = m \cdot \Delta v$$

$$\text{mom}_2 - \text{mom}_1 = F \cdot t$$

$$I = m(v_2 - v_1)$$

Dec 5-9:21 AM

Worksheet:

On your white board:

- what are you given in the question?
- what do you want to find out?
- so then, which equation?

#1) $m = 1500 \text{ kg}$ $\text{mom} = m \cdot v$
 $v = 27 \text{ m/s}$
 $\text{mom} = ?$ $1500 \text{ kg} \cdot 27 \frac{\text{m}}{\text{s}}$
 $= 40,500 \frac{\text{kg} \cdot \text{m}}{\text{s}}$
 #2 BOWLING } BASE $\text{mom} = m \cdot v$

#3
 $F = 200 \text{ N}$ A) $I = F \cdot t$
 $t = 0.05 \text{ s}$ B) $\Delta \text{mom.} = ?$
 $I = ?$ $I = \Delta \text{mom.}$

$$\text{N} \cdot \text{s} \stackrel{?}{=} \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

$$\frac{\text{kg} \cdot \text{m}}{\text{s}^2} \cdot \text{s} = \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

Dec 11-10:07 AM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. What is one safety device that increases time of stopping to decrease force?

WATER, HELMET, PADDING, ...

2. Force = 200 N and Time = 0.05 sec
What is the impulse?

$$\mathbf{I = 200N \cdot 0.05s = 10N \cdot s}$$

3. (Very easy question!) A ball experienced a change in momentum of 6.0 kg*m/s. What is the impulse on the ball?

6.0N.s

Dec 2-7:55 AM